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#### ABSTRACT

This paper reports the results of a survey that addressed the type of preparation faculty at the University of Nebraska-Lincoln want to help them build appropriate teaching skills for distance education delivery. Specifically, it examined the type of education, assistance, and support faculty need to develop educational materials for distance delivery and differences in the way education, assistance, and support are viewed by various categories of teaching faculty and administrators. The 39 items listed on the survey were rated on a scale of 1-4 (very important to very unimportant); using the overall mean score, 13 items were classified as very important and 26 as somewhat important. A table of results is included. The discussion highlights the following groupings of survey items: (1) developing interaction; (2) developing instructional materials; (3) applying selected technologies; (4) curriculum content, design, and evaluation; (5) assistant help; (6) technologies; (7) logistics related to student services; (8) logistics related to overall policies; (9) peer support; and (10) workload composition. Also discussed are challenges for providing educational opportunities for the teaching faculty who expect to take on distance teaching within the next 2 to 5 years. (DLS)

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Education, Assistance, and Support Needed for Distance Delivery: Faculty and Administrators' Perceptions

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Distance Education . . . taking the educational process beyond the "four walls" of the traditional classroom. This educational method provides opportunities for institutions of higher education to deliver instruction and training to geographically diverse audiences of all ages through the use of telecommunication technologies. What kind of educational opportunities do faculty want to help them incorporate distance delivery? What kind of assistance do they need? What kind of support do they want? To expand distance delivery in the future, it's important to understand the type of education faculty need so they can develop their skills and build appropriate teaching strategies.



Public expectations that education needs to be accessible in the workplace, marketplace, and home, as well as in traditional educational settings (Nebraska Network 21 Project Team, 1995) are increasingly being met by using technology to teach both formal and non-formal education via distance. The University of Nebraska, as well as other institutions of higher education, are converting classroom-based courses into distance offerings to meet learner requests that institutions provide educational opportunities throughout the state.

The Institute of Agriculture and Natural Resources (IANR) at the University of Nebraska-Lincoln has *A Strategic Plan* (1995) calling for expanding distance delivery for educational programs. While opportunities exist for delivering distance education, faculty often express concerns about teaching via distance. In order to better understand faculty concerns about distance delivery, a mail survey was developed in 1997. It addressed the type of preparation faculty want to help them build appropriate teaching skills for distance education delivery (Schauer, 1997).



Specifically, it addressed:

- The type of education, assistance, and support faculty need to develop educational materials for distance delivery.
- Differences in the way education, assistance, and support are viewed by (a) teaching faculty and administrators, (b) teaching faculty who have or are teaching via distance, expecting to teach via distance in the next three to five years, and never expecting to teach via distance, (c) faculty who have taught 10 years or less, 11 to 20 years, and more than 20 years, (d) tenured and non-tenured faculty, and (e) faculty teaching only undergraduate classes and those teaching only graduate classes.

The target audience for the survey was faculty and administrators in the Colleges of Agricultural Sciences and Natural Resources (CASNR) and Human Resources and Family Sciences (CHRFS) at the University of Nebraska-Lincoln. Out of 30 administrators and 207 faculty who had any proportion of their FTE assigned to teaching, 70% returned the survey.

#### A Profile of Survey Respondents

Out of the responding group, 53% were full professors and administrators, 42% were associate and assistant professors, and 5% were instructors; 80% were tenured; 28% taught for less than 10 years, 35% between 10 and 20 years, and 36% more than 20 years; 23% taught undergraduate level courses, 13% graduate level, 60% both levels, and 4% were not teaching at the time of the survey.

Slightly over one-fourth (26%) of the teaching faculty have taught via distance. They obtained their distance teaching experience by teaching either an entire course, parts of a course, or workshops. Another two-fifths (40%) expect to teach via distance within three to five years, while one-third (34%) never expect to teach via distance.

#### **Educational, Assistance, and Support Needs for Faculty**

There were 39 items listed on the survey that related to educational needs, assistance, and institutional support for the faculty who deliver instruction via distance. These items were rated on a scale where 1 = very important, 2 = somewhat important, 3 = somewhat unimportant, and 4 = very unimportant. Using the overall mean score, 13 of the items were classified as very important while 26 items were classified as somewhat important (Table 1). None of the items were classified as unimportant needs for helping faculty deliver education via distance.

#### **Very Important Needs**

In the very important category, several individual items appear to group together. Therefore, faculty feel it is most important to obtain further education about, assistance with, or support for (a) developing interaction, (b) developing instructional materials, and (c) applying selected technologies. They also feel it is very important to have assistance with 'marketing a course,' an item that does not fit into a grouping with other items.



Table 1. Ranking of Issues Related to Education and Support Needs for Faculty

Very Important*					
Issue	Mean	Issue	Mean		
Instructor to student interaction Developing materials for students that support the course content	1.34	Developing materials for students that support the use of the required technology Mixing technologies	1.46 1.47		
Marketing the course Students' interaction with the	1.41	Having a general knowledge of distance education	1.48		
instructional content Developing an instructional design	1.41 1.43	Providing a local contact point for students Implementing various teaching	1.49		
Student feedback Additional operational support Web-based delivery strategies	1.43 1.46 1.46	techniques and strategies	1.50		

## Somewhat Important\*

Issue	Mean	Issue	Mean
Planning and developing		Clarifying tuition costs	1.71
curriculum content	1.53	Videotape development and	
Developing support materials for		usage	1.74
assistants or facilitators	1.54	Audio conferences	1.85
Integrating multimedia		Peer feedback	1.89
applications	1.54	Satellite delivery strategies	1.93
Outcome evaluation (summative)	1.55	A mentoring partner	1.98
Designing graphics	1.56	Issues of teacher certification	
Providing easier access to library		when institutional boundaries	
services for students	1.56	are crossed	2.05
Student or graduate assistance/		Registration policies for distance	
help	1.56	courses	2.18
Clarifying transfer issues	1.57	Tuition and fee requirements	2.29
E-mail usage	1.58	Issues addressed by the Nebraska	
Process evaluation (formative)	1.58	Coordinating Commission for	
Taking care of registration	1.60	Post-Secondary Education	2.40
Student to student interaction	1.62	Increase in pay	2.43
Addressing student learning			
styles	1.65		
Copyright issues	1.65		
Reduction in duties	1.65		

<sup>\*</sup>Scale: Very Important: M = 1 to 1.50; Somewhat Important: M = 1.51 to 2.49.



Developing interaction. The specific items grouped together include:

- Instructor to student interaction
- Student interaction with the instructional content
- Student feedback
- Providing a local contact point for students

Faculty who tended to rank 'instructor to student interaction' higher in importance were those who have taught 10 years or less and those teaching only undergraduate courses. Those who tended to rank 'student interaction with the instructional content' higher in importance were those teaching only undergraduate courses and non-tenured faculty. Faculty who tended to rank 'providing a local contact point for students' higher in importance were those teaching only undergraduate level courses.

**Developing instructional materials.** The specific items grouped together include:

- Developing materials for students that support the course content
- Developing an instructional design
- Additional operating support
- Having a general knowledge of distance education
- Implementing various teaching techniques and strategies

Faculty who tended to rank 'developing an instructional design' higher in importance were those who taught only undergraduate courses. Faculty who taught 10 years or less also tended to view 'developing an instructional design' as more important than did the faculty with more than 20 years teaching experience.

Faculty who tended to rank the need for 'additional operating support' higher in importance were those who taught only undergraduate courses.

Faculty who tended to rank 'implementing various teaching techniques and strategies' higher in importance were those who taught only undergraduate courses and non-tenured faculty. Those teaching faculty having or expecting to teach via distance also ranked 'implementing various teaching techniques and strategies' as more important to know about than did the faculty never intending to teach via distance.

Applying selected technologies. The specific items grouped together include:

- Developing materials for students that support the use of the required technology
- Web-based delivery strategies
- Mixing technologies

Faculty having taught, or expecting to teach via distance tended to rank 'mixing technologies' higher in importance than did the faculty never intending to teach via distance. Faculty who taught 10 years or less tended to rank 'mixing technologies' higher in importance than did the faculty with 11 to 20 years teaching experience.

#### **Somewhat Important Needs**

In the somewhat important category, items appear to group together into six general categories: (a) curriculum content, design, and evaluation, (b) assistant help, (c) selected



technologies, (d) logistics, (e) peer support, and (f) workload compensation. All items related to curriculum content, design, and evaluation along with those related to assistant help fell within the upper range of the somewhat important category (means between 1.53 and 1.65). The items related to selected technologies tended to have slightly lower means than the previous two groupings, but they still remained above the somewhat important score of 2.0. Logistical issues related to student services remained above the somewhat important score of 2.0 while logistical issues related to overall policies fell below the somewhat important score of 2.0. Peer support items remained above the somewhat important score of 2.0. Workload compensation was split—'reduction in duties' ranked above the somewhat important mean of 2.0 while 'increase in pay' ranked close to being unimportant.

## Curriculum content, design, and evaluation. The specific items grouped together include:

- Planning and developing curriculum content
- Outcome evaluation
- Designing graphics
- Process evaluation (formative)
- Student to student interaction
- Addressing student learning styles

Faculty who tended to rank 'student to student interaction' higher in importance were those teaching undergraduate level courses, those with 10 years or less teaching experience, and non-tenured faculty. Faculty who tended to rank 'addressing student learning styles' higher in importance were those teaching undergraduate level courses and non-tenured faculty. Faculty who tended to rank 'process evaluation' higher in importance have taught 10 years or less or were non-tenured.

### Assistant help. The specific items grouped together include:

- Developing support materials for assistants or facilitators
- Student or graduate assistant help

Those faculty who taught 10 years or less ranked 'developing support materials for assistants or facilitators' higher in importance than did the faculty with more than 20 years teaching experience. Faculty who tended to rank 'student or graduate assistant help' higher in importance were those teaching only undergraduate level courses.

## Technologies. The specific items grouped together include:

- Integrating multimedia applications
- ❖ E-mail usage
- Videotape development and usage
- Audio conferences
- Satellite delivery strategies

Faculty who taught 10 years or less tended to rank 'integrating multimedia applications' and 'email usage' higher in importance.



## Logistics related to student services. The specific items grouped together include:

- Providing easier access to library services for students
- Clarifying transfer issues
- Taking care of registration
- Copyright issues
- Clarifying tuition costs

Faculty teaching undergraduate level courses saw the items of 'providing easier access to library services for students' and 'copyright issues' as more important than did faculty teaching graduate level. Administrators saw the items of 'taking care of registration,' 'copyright issues,' and 'clarifying tuition costs' as more important to know about than did faculty.

## Logistics related to overall policies. The specific items grouped together include:

- Issues of teacher certification where institutional boundaries are crossed
- Registration policies for distance courses
- Tuition and fee requirements
- Issues addressed by the Nebraska Coordinating Commission for Post-Secondary Education

Faculty who teach only undergraduate courses tended to rank 'providing easier access to library services for students' and 'copyright issues' higher in importance. Those teaching only undergraduate courses also tended to rank 'issues of teacher certification when institutional boundaries are crossed' higher in importance. Faculty who have taught 10 years or less tended to rank 'issues of teacher certification when institutional boundaries are crossed' higher in importance than did the faculty with more than 20 years teaching experience. Faculty who have taught 10 years or less tended to rank 'issues addressed by the Nebraska Coordinating Commission for Post-Secondary Education' higher in importance than did the faculty with 11 to 20 years teaching experience. Non-tenured faculty tended to rank 'tuition and fee requirements' higher in importance.

Administrators were more likely to view the item of 'tuition and fee requirements' as more important to know about than were faculty.

## Peer support. The specific items grouped together include:

- Peer feedback
- A mentoring partner

Faculty teaching only undergraduate courses tended to rank 'peer feedback' higher in importance. Those faculty with less than 10 years teaching experience tended to rank 'mentoring partner' higher in importance than did the faculty with more than 20 years teaching experience. And, non-tenured faculty also tended to rank 'mentoring partner' higher in importance.

## Workload composition. The specific items grouped together include:

- Reduction in duties
- Increase in pay



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Non-tenured faculty tended to rank 'reduction in duties' higher in importance. Faculty with 11 to 20 years teaching experience tended to ran 'increase in pay' higher in importance than did faculty with more than 20 years teaching experience. And, those teaching only undergraduate courses also tended to rank 'increase in pay' higher in importance.

#### Challenges

Since another 40% of the teaching faculty who responded to the survey expect to take on the challenge of teaching via distance in the next two to five years and support IANR's Strategic Plan, the Institute has a number of challenges for providing educational opportunities, assistance, and support for this changing educational strategy. Specific issues to address to help faculty prepare to teach via distance are:

- ❖ Interactive learning experiences—Educational opportunities for faculty need to focus on providing student learning experiences that support an interactive learning environment. This includes developing materials that mix technologies and make use of web-based opportunities.
- ❖ Designing and improving the curriculum—Educational opportunities focusing on curriculum content, design, and evaluation should be integrated into an educational package that has an overall focus on developing interactive learning experiences for the student.
- Marketing courses—Strategies to market courses need to continue to be developed by others who support distance delivery so faculty can devote their efforts to the educational process.
- ❖ Assistant help—Strategies should continue to be developed to support assistants or facilitators and funds should be identified to offer graduate assistant help.
- ❖ Technical processes—Education on specific technical process (e.g. integrating multimedia applications, e-mail usage, videotape development, audio conferencing, and television delivery) should be available as faculty need to use a specific process.
- Peer support—Opportunities need to be available to distance teachers to obtain peer feedback and work with a mentoring partner if they so desire.
- Workload support—Consideration needs to be given to adjusting duties to accommodate course development rather than offering additional financial reimbursement.
- ❖ Logistics related to student services—Other entities need to continue to address logistics related to student services (e.g., library services, transfer issues, registration, copyright, and tuition costs), but faculty should have a working knowledge about how these issues impact on distance teaching.
- ❖ Logistics related to overall policies—Administrators need to continue to focus on the logistics related to overall policies (e.g., teacher certification issues, registration policies, tuition and fees requirements, and Coordinating Commission for Post-



Secondary Education) that affect distance delivery and just keep faculty informed about them.

As more and more faculty teach via distance, their needs for education, assistance, and support will need to be monitored so institutional assistance can be adapted as technologies change and faculty experiences are shared throughout different departments. The most supportive aspects can then be implemented within the Institute so the goals for distance education in IANR'S Strategic Plan can be realized.

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#### **Autobiographical Sketches**

Jolene Schauer is a Graduate Student and Research Assistant in the Department of Agricultural Leadership, Education and Communication at the University of Nebraska-Lincoln. She is working with Dr. S. Kay Rockwell on a W. K. Kellogg initiative focusing on Food Systems and Food Systems Education in Nebraska for the Twenty-first Century. She received her Master of Science Degree in Leadership Education (1997) and is currently pursuing her doctorate in Community and Human Resources. Her research interests have been in distance education and preparation for college teaching and employability.

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Dr. S. Kay Rockwell is Professor and Extension Specialist, Program Evaluation and Distance Education. She has a joint appointment between the Departments of Agricultural Leadership, Education & Communication (AgLEC) and Vocational and Adult Education (DVAE), and is a Graduate Faculty Fellow at the University of Nebraska. Her teaching responsibilities focus on a graduate course on Program Evaluation in Adult Education and Training. Her research appointment focuses on distance education. However, her research interests are two-fold: (a) using distance education methods to facilitate adult learning and (b) using evaluation to measure the effectiveness and outcomes of extension programs. She has received state and national awards which include the Sustained Excellence in Extension Evaluation Award (1992) and the Excellence in Evaluation Training Award (1996) from the



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Dr. Dave Marx obtained his BS in chemistry from the College of Wooster followed by his Masters degree in statistics from the University of Missouri (Columbia). In 1979 he received his Ph D from the University of Kentucky in statistics. He was employed at the University of Arizona, developed the Agricultural Statistics Laboratory at the University of Arkansas, and then began at the Department of Biometry at the University of Nebraska where he is currently professor of Biometry. He has given numerous papers and workshops in applied statistics. Dr. Marx has consulted both domestically and internationally visiting Morocco, Burundi, Rwanda, Niger, Colombia, Venzuela, Costa Rica, Syria, Turkey, and St. Kitts. His areas of specialization include: spatial statistics, experimental design, statistical methods for developing countries, analysis of messy data, linear and nonlinear models.

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